



Metro Nashville
DISTRICT ENERGY SYSTEM

DES Advisory Board Meeting
Second Quarter FY21
February 18, 2021



Agenda

1. Call to Order
2. Review & Approval of Previous Meeting Minutes
3. Customer Sales
4. nCOVID-19 Response
5. Review of DES Contractor Performance
6. Natural Gas Purchasing Update
7. FY20 Costs to Date
8. FY21 Budget
9. Marketing
10. Capital Projects Review & Status
11. Other Board Member Items
12. Adjourn

1. Call to Order
2. Review & Approval of Previous Meeting Minutes

3. Customer Sales

Summary Table 3: Customer Cost Comparison for the Previous 12 Months

		Steam - Rolling 12 Month			Chilled Water - Rolling 12 Month		
		Jan 2019 - Dec 2019	Jan 2020 - Dec 2020	% Diff.	Jan 2019 - Dec 2019	Jan 2020 - Dec 2020	% Diff.
Private	Cost	\$ 1,443,898	\$ 1,207,889	-16.35%	\$ 3,707,481	\$ 3,627,495	-2.16%
	Usage (lbs or tonhrs)	100,360,047	80,036,285	-20.25%	19,982,794	16,122,808	-19.32%
State	Cost	\$ 1,744,166	\$ 1,617,519	-7.26%	\$ 3,208,378	\$ 3,201,903	-0.20%
	Usage (lbs or tonhrs)	110,602,780	101,812,921	-7.95%	12,712,201	12,300,061	-3.24%
Metro	Cost	\$ 1,846,550	\$ 1,547,223	-16.21%	\$ 4,972,753	\$ 4,285,387	-13.82%
	Usage (lbs or tonhrs)	158,932,509	135,716,725	-14.61%	29,127,362	20,860,325	-28.38%
Aggregate	Cost	\$ 5,034,614	\$ 4,372,631	-13.15%	\$11,888,612	\$11,114,785	-6.51%
	Usage (lbs or tonhrs)	369,895,336	317,565,931	-14.15%	61,822,357	49,283,194	-20.28%
	Unit Cost	\$ 13.61	\$ 13.77	1.2%	\$ 0.192	\$ 0.226	17.28%

MFA, True-up, late fees and misc. are not included in values shown



Figure 3A. Historic Chilled Water Sales

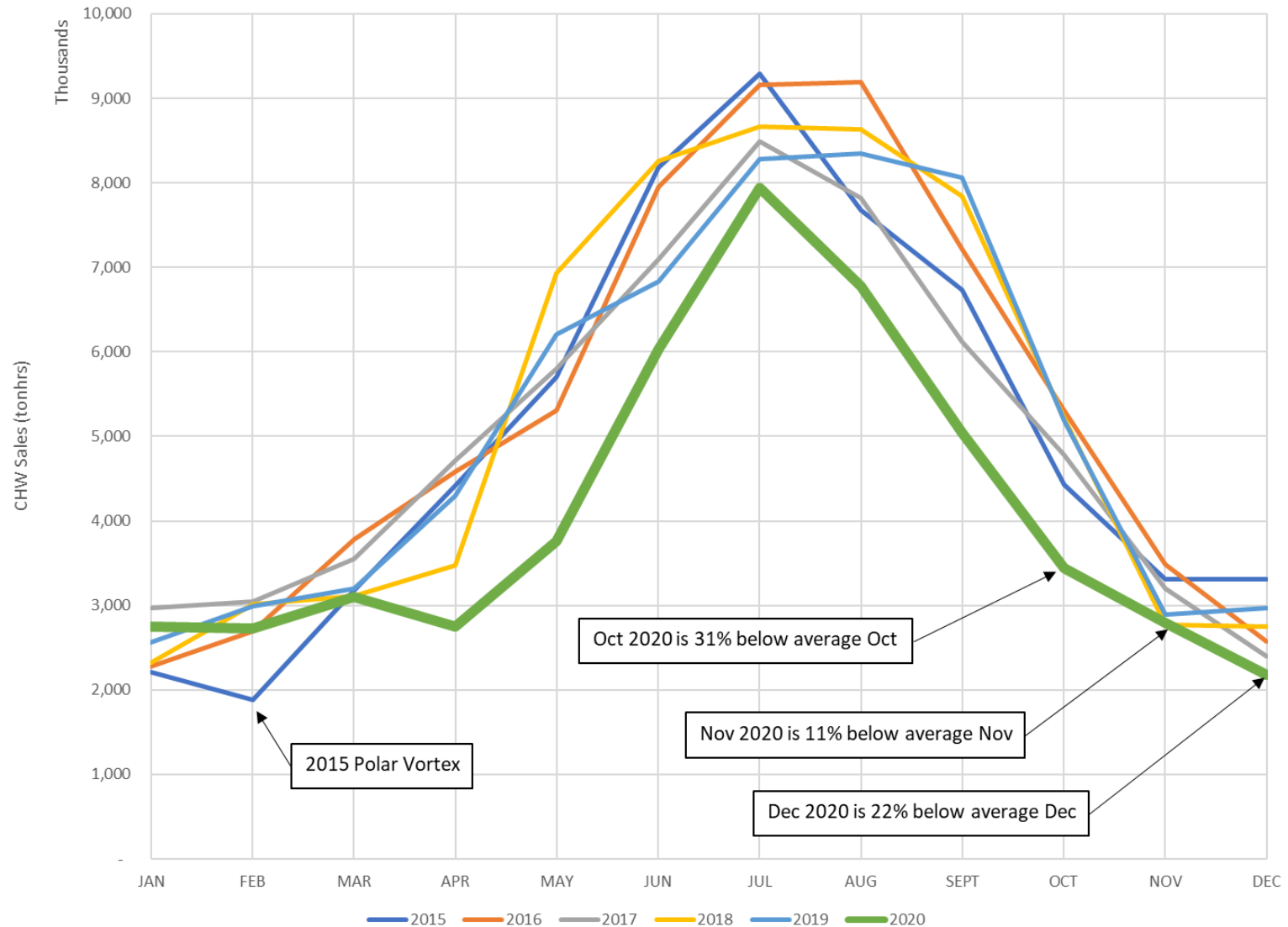
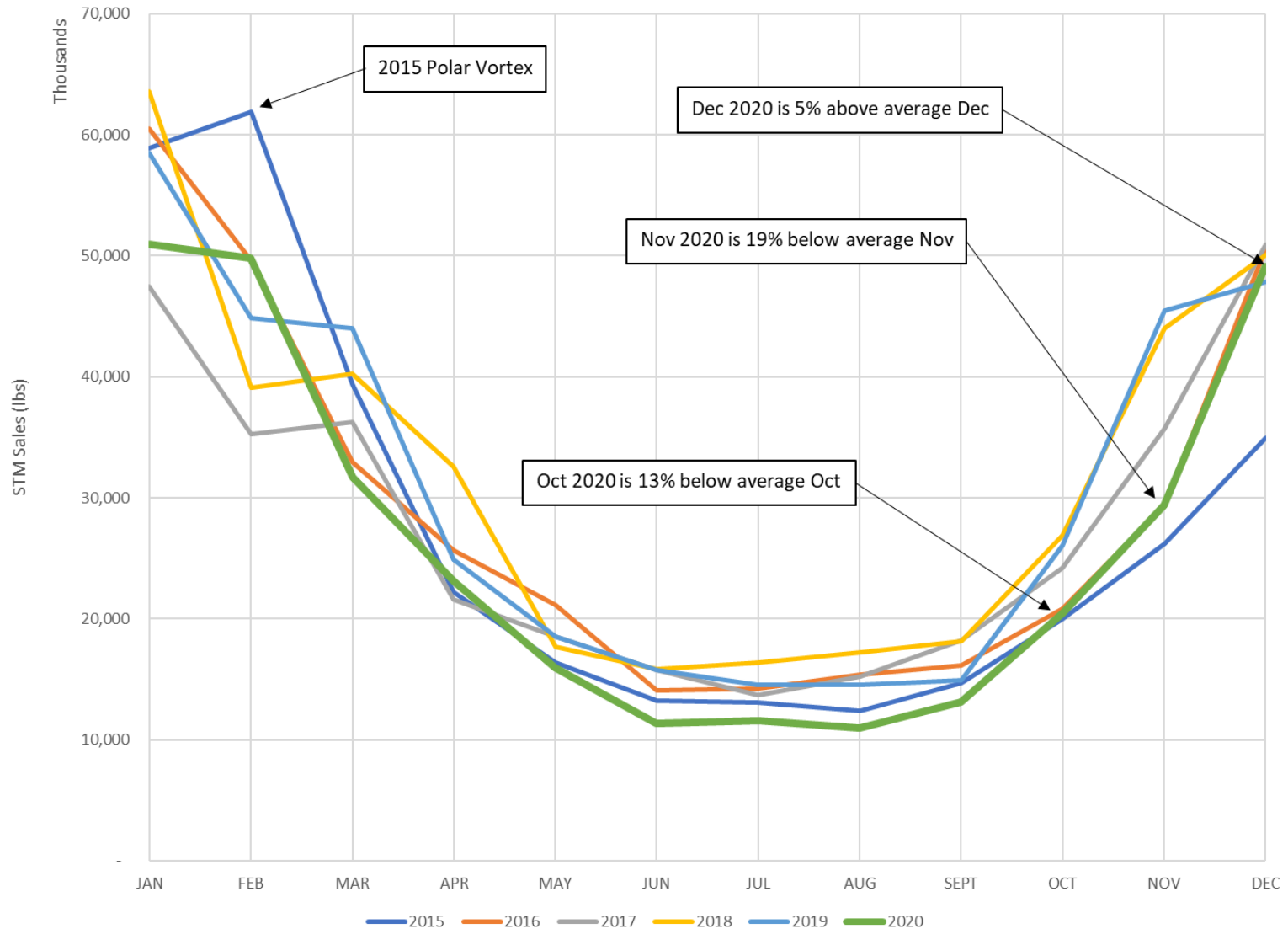


Figure 3B. Historic Steam Sales








4. nCOVID-19 Response

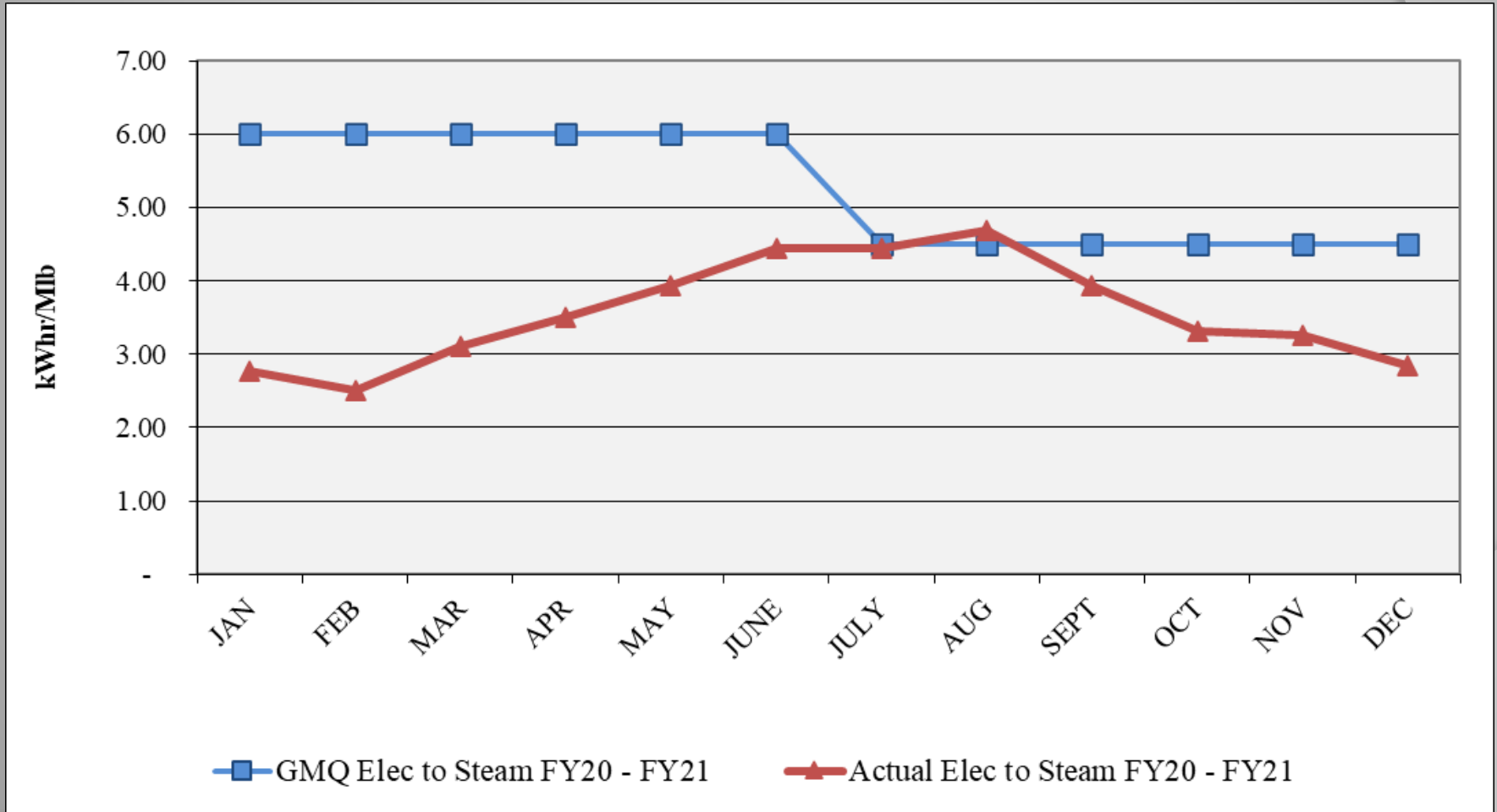
- DES Advisory Board voted in First Quarter meeting to waive late fees and revisit issue this meeting
- Two customers opted for deferral last summer and are making their payments; no new customer deferrals or requests
- There are no customers currently in arrears more than 30 days
- CNE continues to limit access to EGF to essential personnel only
- Tele-meetings and job-site meetings still occurring

5. *Review of DES Contractor Performance*

Contractor (CNE) has met their contractual obligations for FY21 to date except for exceeding some of the new performance guarantees.

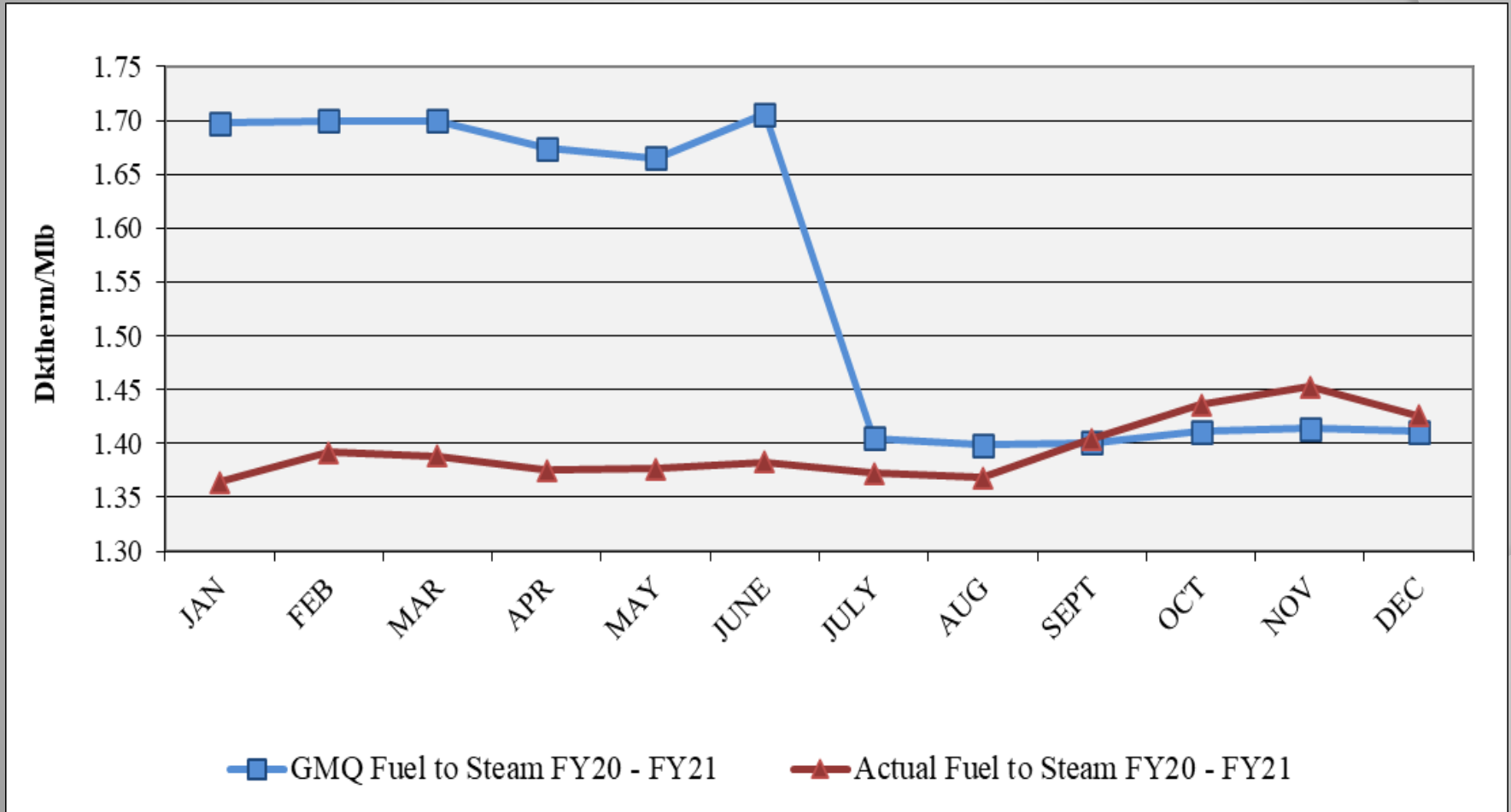
-  Excellent Performance – No Improvement Necessary
-  Satisfactory Performance – Some Improvement Could Be Made
-  Poor Performance – Much Improvement Necessary

Performance Measurement FY21: Steam Electric Conversion ●



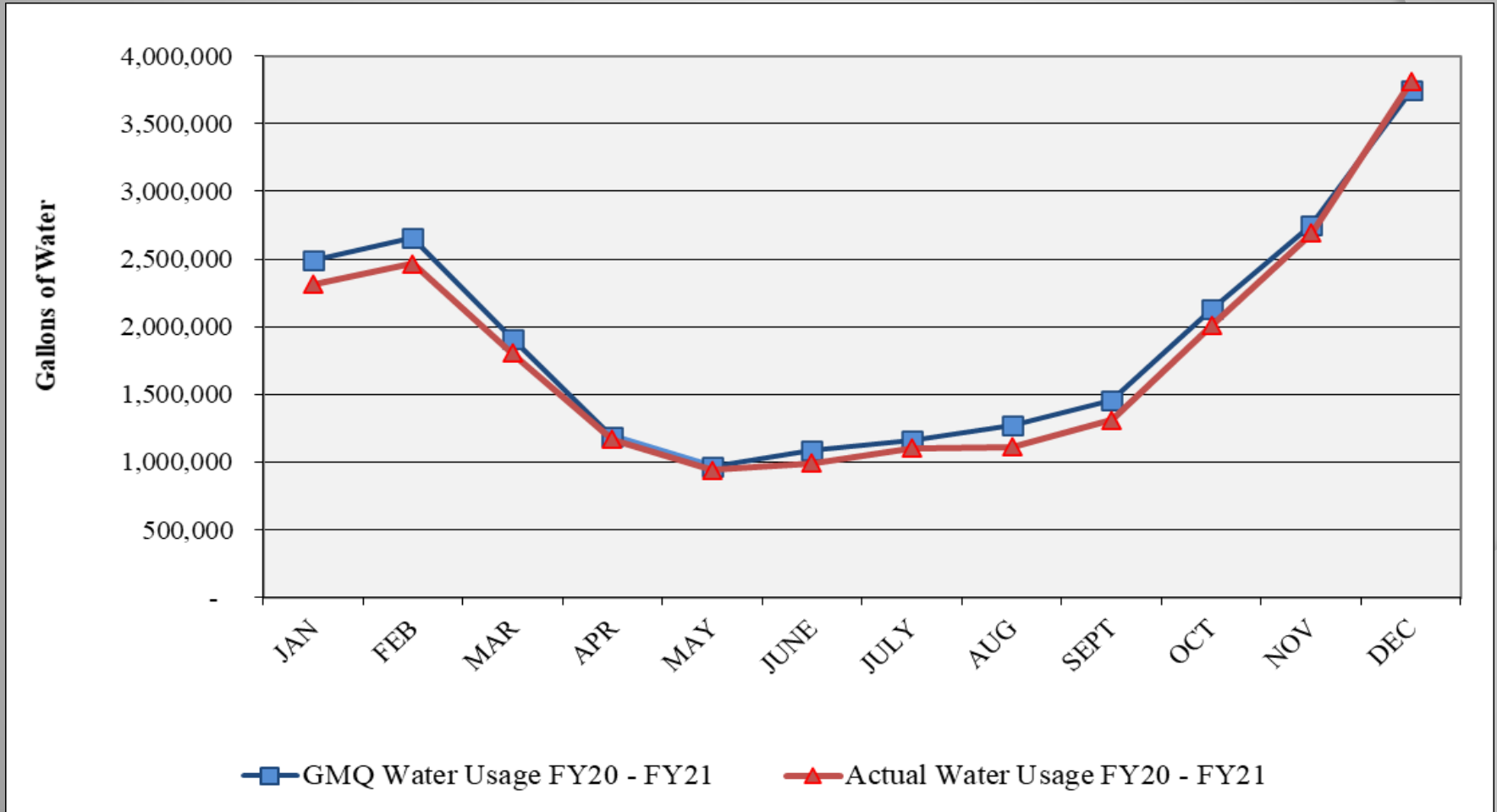
GMQ exceeded in August.

Performance Measurement FY21: Steam Plant Efficiency



GMQ exceeded in Sept, Oct, Nov and Dec.

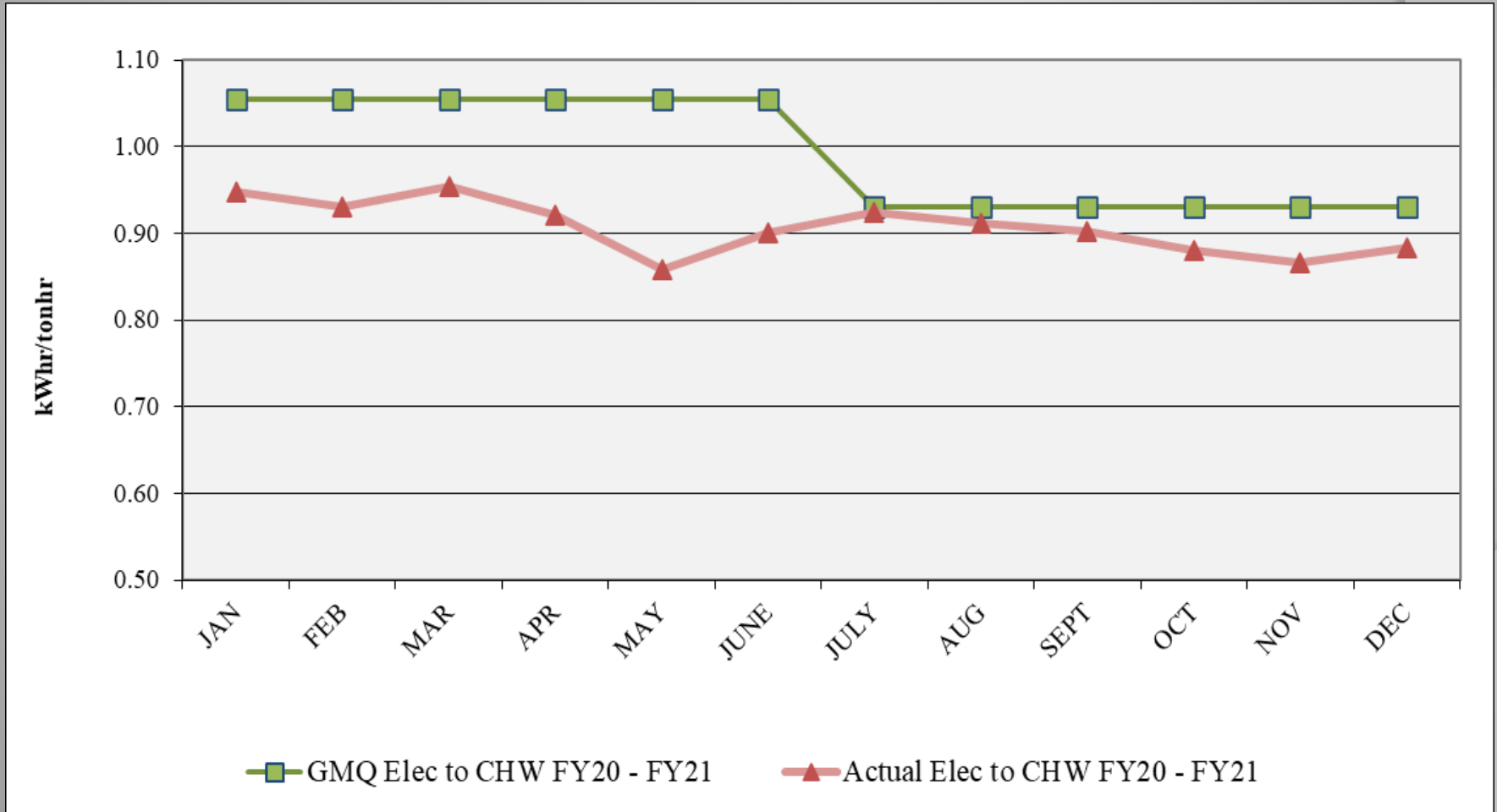
Performance Measurement FY21: Steam Water Conversion ●



GMQ exceeded in December.

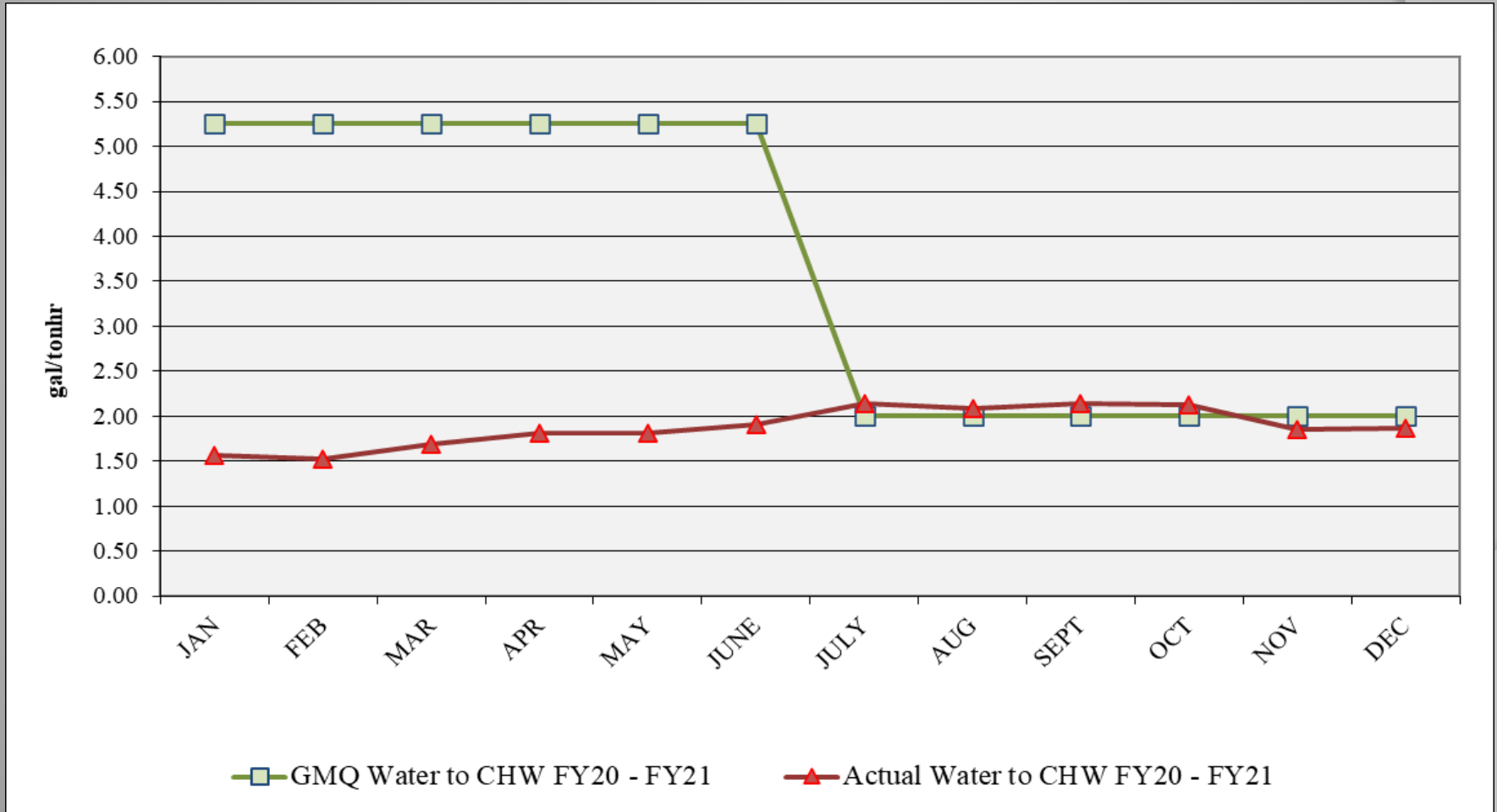
Performance Measurement FY21: CHW

Electric Conversion ●



No excursion during the quarter.

Performance Measurement FY21: CHW Water Conversion ●



GMQ exceeded July, Aug, Sept and Oct.



Water Treatment

Q2FY21 Q1FY21 Q4FY20 Q3FY20

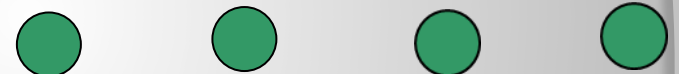
❖ Steam and Condensate

- ❖ Corrosion
- ❖ Iron
- ❖ Hardness; dumping condensate
- ❖ Chlorine/Sulfite



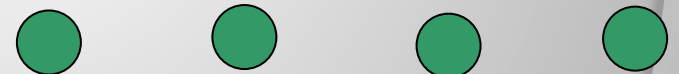
❖ Condensing Water

- ❖ Conductivity
- ❖ Biologicals



❖ Chilled Water

- ❖ Hardness
- ❖ Corrosion
- ❖ EGF and Customer Biologicals Good
- ❖ Deposits





EGF Walkthrough

Q2FY21 Q1FY21 Q4FY20 Q3FY20

✓ Equipment Maintenance	● +	● +	●	●
✓ Operations	●	●	●	●
✓ Electrical	●	●	●	●
✓ Housekeeping	●	●	●	●
✓ Building Structure	●	●	●	●
✓ Building Exterior and Grounds	●	●	●	●



EDS Walkthrough

Q2FY21 Q1FY21 Q4FY20 Q3FY20

✓ Vault/Tunnel Housekeeping	● +	● +	●	●
✓ Maintenance Items				
✓ Insulation Repair/ Replacement	●	●	●	●
✓ Water Infiltration	●	●	●	●
✓ Corrosion of Structural Metal Components	●	●	●	●
✓ Safety Items	●	●	●	●

6. *Natural Gas Purchasing*

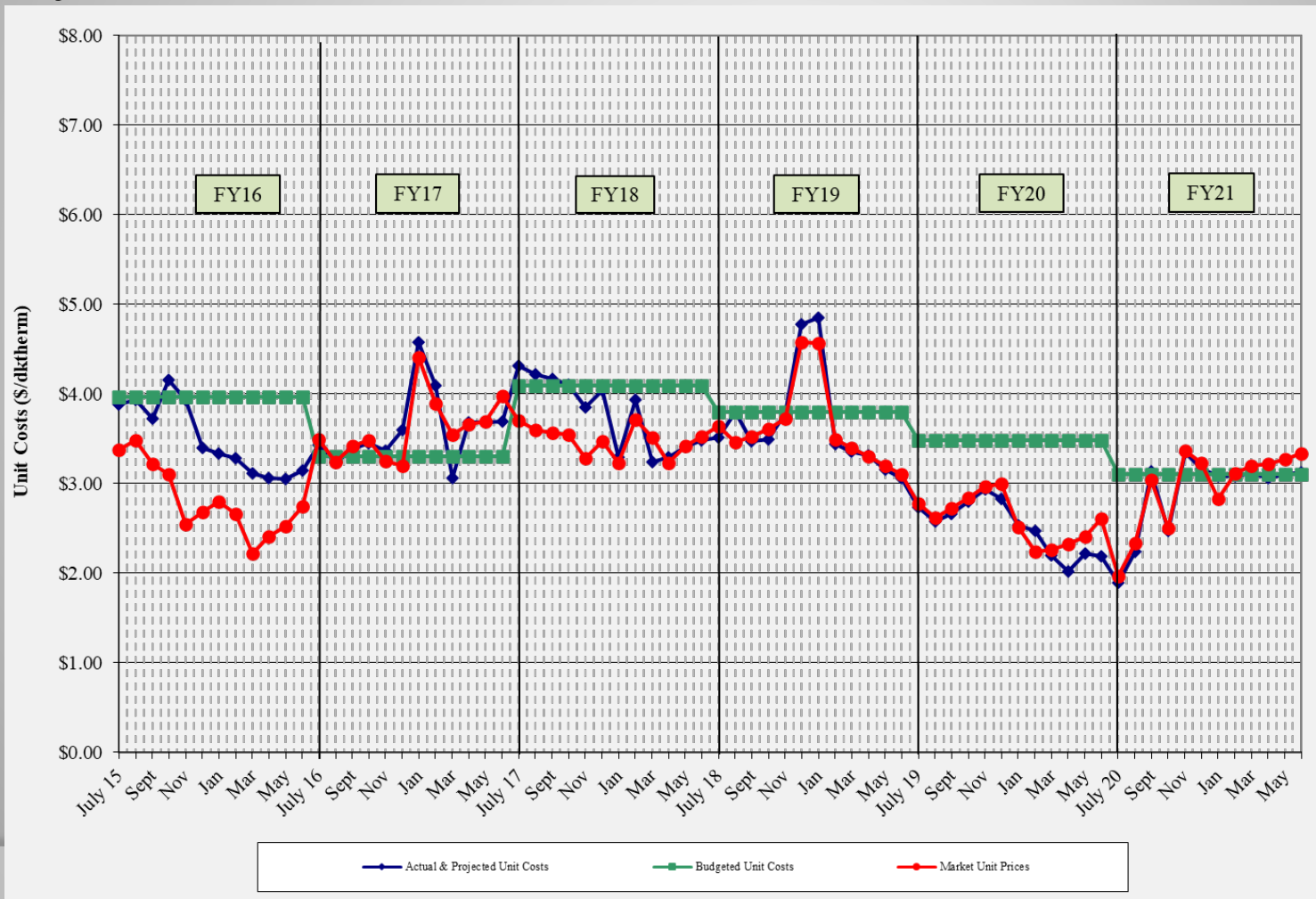
- ❖ Natural Gas Purchasing Review
 - ❖ Table 6: FY21 Gas Spending & Budget Comparison
 - ❖ Figure 6: Actual and Projected Gas Cost Comparison

Table 6: FY21 Gas Spending & Budget Comparison

		Actual FY21 To Dec 31	Budget FY21	Percent Difference
Steam Sendout (Mlbs)		188,136	183,845	2.3%
Fuel Use (Dth) (includes propane)	●	266,266	266,943	-2.5%
Plant Eff (Dth/Mlb)	●	1.415	1.452	-2.5%
Total Gas Cost (includes propane)	●	\$690,900	\$792,821	-12.9%
Unit Cost of Fuel (\$/Dth)	●	\$2.595	\$2.970	-12.6%

Excludes consultant fees and FEA and budget contingency; Includes transportation and actual propane costs and usages except unused pre-purchased propane

Figure 6. Actual and Projected Gas Cost Comparison History



7. FY21 Costs to Date

Item	FY21 Budget	FY21 Actual to date	Percent of FY21 Budget
FOC's	\$ 3,776,800	\$ 1,888,405	50.00%
Pass Throughs			
Administrative Costs	\$ 393,900	\$ 167,819	42.60%
Chemicals	\$ 260,700	\$ 140,141	53.76%
R&I Fund Transfers	\$ 291,900	\$ 145,950	50.00%
Water/Sewer	\$ 624,000	\$ 504,703	80.88%
Fuel Base	\$ 2,001,900	\$ 790,306	39.48%
Fuel Contingency	\$ 431,900	\$ -	0.00%
Electricity	\$ 6,130,100	\$ 2,198,940	35.87%
ORF Deposit	\$ -	\$ -	
Debt Service	\$ 5,098,000	\$ 2,665,609	52.29%
Total Expenses	\$ 19,009,200	\$ 8,501,873	44.73%
Total Revenues	\$ 18,378,500	\$ 8,000,704	43.53%
Metro Funding	\$ 630,700	\$ 315,350	50.00%

Actual Costs and Revenues to Date include FY20 True-up Items and exclude 3rd Qtr debt service.

8. FY21 Budget

Item	FY20 Budget	FY21 Budget	Percent Change From FY20 Budget
FOC's	\$ 4,601,600	\$ 3,776,800	-17.92%
Pass Throughs			
Administrative Costs	\$ 393,600	\$ 393,900	0.08%
Chemicals	\$ 253,100	\$ 260,700	3.00%
R&I Fund Transfers	\$ 287,600	\$ 291,900	1.50%
Water/Sewer	\$ 714,000	\$ 624,000	-12.61%
Fuel Base	\$ 2,575,700	\$ 2,001,900	-22.28%
Fuel Contingency	\$ 507,000	\$ 431,900	-14.81%
Electricity	\$ 5,977,200	\$ 6,130,100	2.56%
ORF Deposit	\$ -	\$ -	
Debt Service	\$ 5,079,200	\$ 5,098,000	0.37%
Total Expenses	\$ 20,389,000	\$ 19,009,200	-6.77%
Total Revenues	\$ 19,070,500	\$ 18,378,500	-3.63%
Metro Funding	\$ 1,318,500	\$ 630,700	-52.17%

9. *Marketing*

Remaining Capacity for Sale (approximate)

- 2,429 tons of chilled water
- 24,622 pph of steam

Potential Customers

- Service to Lot K (Peabody Union)
 - Site directly to the east of EGF
 - Potential ~1,000 ton and ~15,000 pph

Marketing (con't)

- Service to New KVB Hotels
 - Two hotels with retail space; discussions favorable
 - Site is between 1st Ave S, 2nd Ave S, KVB and Peabody St
 - Potential ~1,400 tons and ~20,000 pph
- Peabody St Hotel
 - Potential 2,000 to 3,000 tons
- New Development North of KVB
 - Potential ~1,100 tons and ~15,000 pph

Marketing (con't)

- Union Street Hotel
 - Ongoing renovation of existing building on Union St
 - Developer waiting on financing approval
 - Potential 100 tons and no steam

10. Capital Expenditure Update

	Spent to End of FY20	FY21 Spending	Balance to Date (01/21/21)
R&I Projects	\$3,887,279	\$129,838	\$179,826
49109-2010 Bond	\$2,600,602	\$5,314	\$0
49107-DES Infrastructure Fund	\$8,499,961	\$39	\$0
49116-DES Infrastructure Fund	\$1,568,389	\$514,766	\$716,171
Total	\$16,556,231	\$649,954	\$895,997

Capital Projects Review

Active Capital Projects – General & Marketing

- DES 133.1: Broadway Tunnel Damage Recovery - ongoing
- DES 139: Options Review - ongoing
- DES 163: MDHA Parcel K Service – development on hold
- DES 168: DES Service to 1st and KVB Hotels – development on hold

Capital Projects Review

Active Capital Projects – Corrosion Repair/Prevention

- DES 153: MH L Repairs – anticipate completion 3rd Qtr FY21
- DES 171: Broadway Tunnel Pipe Support Repairs – construction began 2nd Qtr; anticipate completion 4th Qtr FY21
- DES 172: Viridian Service Line Support Repairs – construction began 2nd Qtr; anticipate completion 4th Qtr FY21
- DES 173: Manhole B3 Repairs – construction/completion 2nd Qtr FY21; awaiting final punch list review
- DES 174: 7th Avenue Tunnel Pipe Support Repairs – construction began 2nd Qtr; anticipate completion 4th Qtr FY21

Capital Projects Review

Active Capital Projects – Piping Repairs/Modifications

- DES 175: Manhole 4 Condensate Return – elim. Trap station; construction during 2nd Qtr FY21; anticipate completion 3rd Qtr FY21
- DES 181: CHW and CND Leak Repairs on 3rd Ave N – construction completed on both leaks during 2nd Qtr FY21; awaiting cost substantiation
- DES 182: MH B10 Exp Jt Replacement – steam exp. jt. bound & requires replacement along w/anchor repairs; requires isolation of MCC; anticipate construction late 3rd Qtr/early 4th Qtr FY21
- DES 183: Hermitage Hotel Svc Line Modifications – Hotel installing grease trap which may req. modifications to steam, condensate & chilled water svc piping; awaiting plan from hotel contractor

Capital Projects Review

Capital Projects – Awaiting Metro Approval

- DES 152: MH A & M Coating Repairs – (MH B added to scope) corrosion repairs
- DES 154: MH K Repairs – corrosion/concrete repairs
- DES 161: MH S6 Insulation – combining w/MH N1 & N2
- DES 177: MH B1 Ladder & Platform – safety; sump pump MH; needs maintenance platform & new ladder; design complete
- DES 178: MH 5 Repairs – corrosion/concrete/insulation repairs
- DES 179: MH 11 Repairs - corrosion/concrete/insulation repairs
- DES 180: State Tunnel Pipe Support Repair – corrosion/concrete repairs

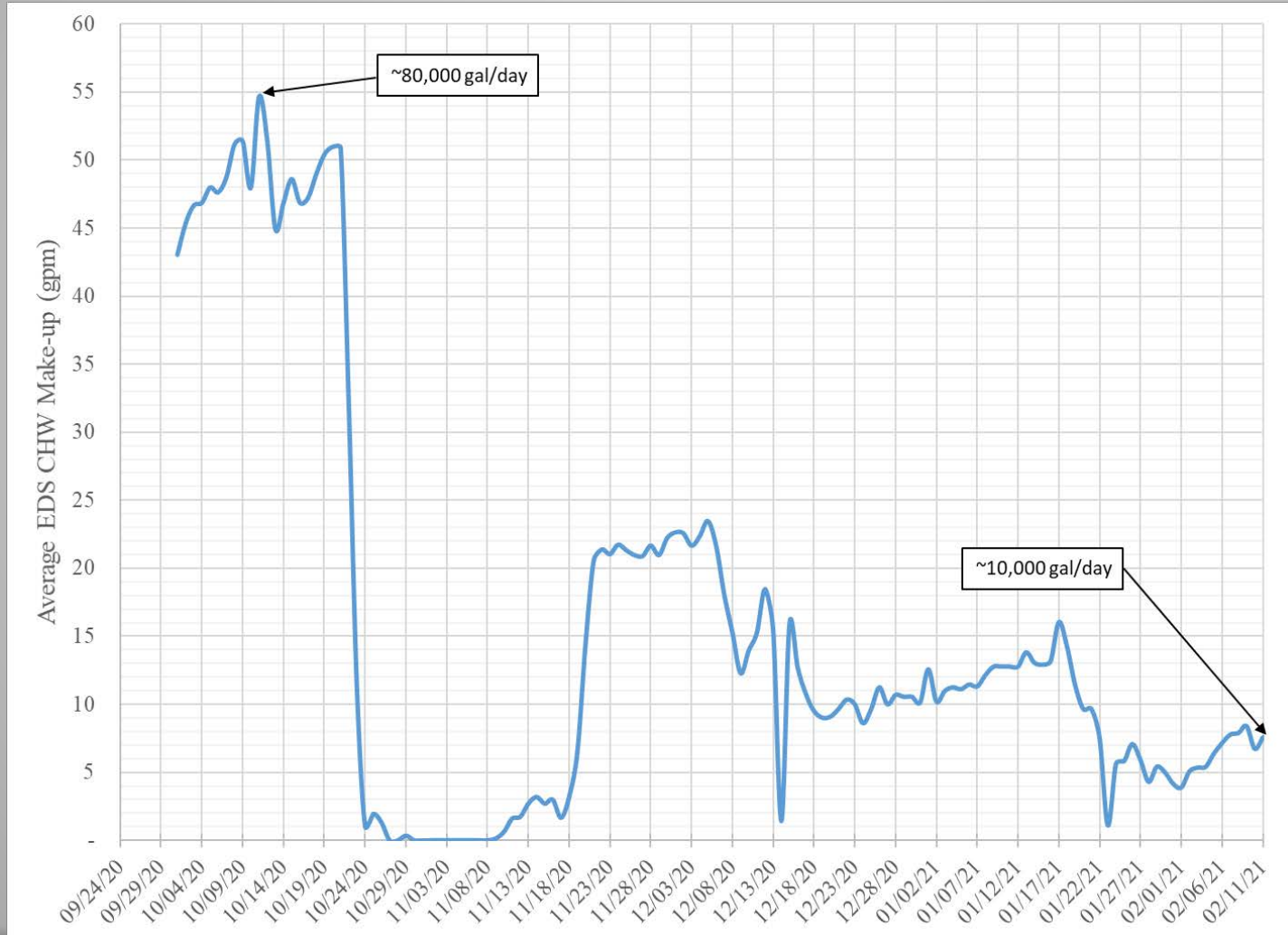


Capital Projects Review

Capital Projects – Closed/In Close-out

- DES 157: MH 9 Repairs
- DES 159: MH B2 Repairs
- DES 169: MH 20 Repairs
- DES 176: MH 9 Condensate Leak

Chilled Water EDS Make-up



Leak found and repaired late October on 3rd Ave N

11. Other Board Member Items

12. Adjourn

- *Advisory Board Meeting Schedule*
- FY21 – 3rd Quarter Meeting – May 20, 2021
- FY21 – 4th Quarter Meeting – August 19, 2021
- FY22 – 1st Quarter Meeting – November 18, 2021
- FY22 – 2nd Quarter Meeting – February 17, 2022